

What is claimed is:

1. An optical element mounted body comprising:
an optical semiconductor element having a
5 light-emitting/light-receiving portion and a predetermined structure formed
on a primary surface thereof; and
a substrate having a mounting surface formed with a first hollow;
wherein said optical semiconductor element is mounted junction-down
on said substrate such that said structure of said optical semiconductor
10 element and said first hollow of said substrate face each other.
2. The optical element mounted body according to claim 1, wherein said
structure is formed with a predetermined positional relation to said
light-emitting/light-receiving portion.
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3. The optical element mounted body according to claim 2, wherein said
structure is used as an alignment marker when aligning said
light-emitting/light-receiving portion on said substrate.
- 20 4. The optical element mounted body according to claim 1, wherein said
optical semiconductor element comprises a projection generated in a
manufacturing process thereof in the vicinity of said structure.
5. The optical element mounted body according to claim 4, wherein said
25 first hollow receives said projection.
6. The optical element mounted body according to claim 1, wherein said
structure is a second hollow extending in parallel to a
light-emitting/light-receiving direction of said light-emitting/light-receiving
30 portion.
7. The optical element mounted body according to claim 6, wherein said
second hollow is a V-groove.

8. The optical element mounted body according to claim 6, wherein said first hollow extends in parallel to a light-emitting/light-receiving direction of said light-emitting/light-receiving portion.

5 9. The optical element mounted body according to claim 1, wherein said substrate is made of silicon.

10. The optical element mounted body according to claim 9, wherein said first hollow is formed by etching a part of said substrate.

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11. The optical element mounted body according to claim 9, wherein said first hollow is not less than 10mm in width, and not less than 5mm in depth.

12. The optical element mounted body according to claim 4, wherein said projection is composed of a semiconductor.

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13. The optical element mounted body according to claim 12, wherein said projection is deposited by crystal growth.

20 14. An optical module comprising:
an optical semiconductor element having a
light-emitting/light-receiving portion and a predetermined structure formed
on a primary surface thereof;
a substrate having a mounting surface;
25 an optical component optically coupled to said optical semiconductor
element; and
a package housing said optical semiconductor element and said
substrate;
wherein said substrate has a first hollow formed on said mounting
30 surface, and
wherein said optical semiconductor element is mounted junction-down
on said substrate such that said structure of said optical semiconductor
element and said first hollow of said substrate face each other.

15. The optical module according to claim 14, wherein said structure is formed with a predetermined positional relation to said light-emitting/light-receiving portion.

5 16. The optical module according to claim 14, wherein said optical semiconductor element comprises a projection generated in a manufacturing process thereof in the vicinity of said structure.

10 17. The optical module according to claim 16, wherein said first hollow receives said projection.

18. The optical module according to claim 14, wherein said substrate is made of silicon, and wherein said first hollow is formed by etching a part of said substrate.

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